

APPENDIX B

25. (Amended) A diode laser system, comprising:
a laser head assembly generating an output beam, the laser head assembly including:
M modules which generate M laser beams, wherein each of said M laser beams
has a different [single] unconstrained wavelength; and
M-2 dichroic filters, wherein each of said M-2 dichroic filters transmits a
corresponding one of said M laser beams and reflects all other of said M laser
beams into a predetermined optical path to produce said output beam,
where M is an integer $[\geq] \geq 2$.

26. (Amended) A diode laser system, comprising:
a laser head assembly which generates an output beam, the laser head assembly including:
M modules which generate M laser beams, wherein each of said M laser beams
occupies a different wavelength band;
M-R dichroic bandedge filters, wherein each of said M-R dichroic bandedge
filters transmits at least a respective one of said M laser beams occupying a given
wavelength band and reflects all other of said M laser beams not occupying the
given wavelength band; and
an optical device which combines said M laser beams to thereby produce said
output beam,
wherein:
M and R are positive integers; and
M is an integer ≥ 2 .

31. (Amended) A laser head assembly which generates an output beam including M laser
beams, comprising:

M modules generating M laser beams, wherein each of said M laser beams has a different single wavelength; and
M-2 dichroic bandedge filters, wherein each of said M-2 dichroic bandedge filters transmits a corresponding one of said M laser beams and reflects all other of said M laser beams;
wherein M is an integer $[\geq] \geq 2$.

32. (Amended) The laser head assembly as recited in claim 31, further comprising a fiber coupling device collecting said M laser beams to produce an output beam[;].

33. (Amended) A method for generating a high energy laser beam, comprising:
(a) generating P collimated laser beams, each of the P collimated laser beams having an unconstrained wavelength within an Mth wavelength band;
(b) repeating step (a) M times so as to produce MxP collimated laser beams [having] grouped into M different [wavelengths] wavelength bands; and
(c) coupling said MxP collimated laser beams into an optical path to produce a high energy beam,
wherein M and P are integers ≥ 2 .

36. (Amended) A diode laser system, comprising:
laser head assembly (LHA) which generates an output beam, the LHA including:
M modules generating M laser beams, wherein each of said M laser beams has a different single wavelength;
M-1 first dichroic bandedge filters defining an optical waveguide for directing all of said M laser beams into the optical path, wherein each of said M-1 [first] bandedge dichroic filters transmits a corresponding one of said M laser beams and reflects all other said M laser beams;
and

a fiber coupling device disposed adjacent to the optical path for collecting said M laser beams to thereby produce an output beam;
where M is an integer ≥ 2 .

40. (Amended) A diode laser system, comprising:

first means for generating M first laser beams, wherein each of said M first laser beams has a different single wavelength;

M-1 first filter means defining a first optical waveguide for directing all of said M first laser beams into [an] a first optical path, wherein each of said M-1 filter means transmits a corresponding one of said M first laser beams and reflects all other said M first laser beams;

second means for generating M second laser beams, wherein each of said M second laser beams has a different single wavelength;

M-1 second filter means defining a second optical waveguide for directing all of said M second laser beams into a second optical path, wherein each of said M-1 second filter means transmits a corresponding one of said M second laser beams and reflects all other said M second laser beams;

polarization combining means disposed at the intersection of said first and second optical paths for coupling said M first and said M second laser beams into said second optical path to thereby produce 2M polarization coupled laser beams; and

fiber coupling means disposed adjacent to said second optical path for collecting said 2M polarization coupled laser beams to thereby produce an output laser beam,

wherein M is a integer ≥ 2 .

41. (Amended) A method for generating a high energy laser beam, comprising:

(a) generating P collimated laser beams, each of the P collimated laser beams having an unconstrained wavelength within an Mth wavelength band;

(b) repeating step (a) M times so as to produce MxP collimated laser beams [having]

grouped into M different [wavelengths] wavelength bands;

(c) coupling said MxP collimated laser beams into an optical oath; and

(d) coupling said MxP collimated laser beams into an ith optical fiber to thereby produce

a corresponding ith output laser beam, where $i = 1$ to N ;

where M, N and P are positive integers and both M and $P \geq 2$.